Claims:

1.   A method for registration of a mobile node on a packet-based

communication network comprising the steps of:

      receiving a care-of address for said mobile node, at a home

network, under a first circumstance from a server computer on a first

network, wherein said care-of address is an expanded address identifying

the network address location for said mobile node; and

      updating the mobile node's registration address on the home

network with said care-of address.

2.   The method of registration of a mobile node on a packet-based

communication network of Claim 1 further comprising the step of:

      requesting said care-of address from a serving mobility manager on

the first network.

3.   The method for registration of a mobile node on a packet-based

communication network of Claim 2 further comprising the step of:

      allocating said mobile node care-of address on the first network

after said request step.

4.   The method for registration of a mobile node on a packet-based communication network of Claim 3 wherein the care-of address is transmitted through the serving mobility manager on the first network to said home network.

5.   The method for registration of a mobile node on a packet-based communication network of Claim 3 wherein the care-of address is obtained from a pool of expanded addresses provided to said serving mobility manager on the first network.

6.   The method for registration of a mobile node on a packet-based communication network of Claim 2 wherein said first network is a foreign network and said first circumstance is a power-up performed by said mobile node on said foreign network.

7.   The method for registration of a mobile node on a packet-based communication network of Claim 2 wherein said first network is a foreign sub-network located on said home network and said first circumstance is a power-up performed by said mobile node on said foreign sub-network.

8.   The method for registration of a mobile node on a packet-based

communication network of Claim 1 wherein the care-of address is allocated by an

AAA server computer on said first network.

9.   A method of performing a mobile node hand-off on a packet-based

communication network, comprising the steps of:

   responding at a second network to a request for said mobile hand-

off from a first network, said response including a care-of address, said

care-of address having an expanded address capable of identifying the

network address location for the mobile node; and

   updating the care-of address for the mobile node on the first

network.

10.   The method of performing a mobile node hand-off on a packet-based

communication network of Claim 9 wherein the mobile node receives said care-of

address from a serving mobility manager.

11.   The method of performing a mobile node hand-off on a packet-based

communication network of Claim 9 wherein the first network is a first foreign

sub-network on a home network.

12.   The method of performing a mobile node hand-off on a packet-based

communication network of Claim 10 wherein the second network is a second

foreign sub-network on a home network.

13.   The method of performing a mobile node hand-off on a packet-based

communication network of Claim 9 wherein the first network is a first foreign

network.

14.   The method of performing a mobile node hand-off on a packet-based

communication network of Claim 13 wherein the second network is a second

foreign network.

15.   The method of performing a mobile node hand-off on a packet-based

communication network of Claim 9 further comprising the steps of:

        moving the mobile node to said second network after requesting

said system hand-off.

16.   The method of performing a mobile node hand-off on a packet-based

communication network of Claim 9 further comprising the steps of:

        moving the mobile node to said second network before requesting

said system hand-off.

17.   A method of registering a mobile node on a packet-based communication

network comprising the steps of:

transmitting a registration request from a first network to a server

computer on a second network;

allocating a care-of address from said server computer on said

second network, said care-of address having an expanded address for

identifying a network address location of said mobile node,

transmitting said care-of address to said first network.

18.   The method for registering a mobile node on a packet-based

communication network of Claim 17 wherein the mobile node moves to the

second network after the transmission of the registration request.

19.   The method of registering a mobile node on a packet-based

communication network of Claim 18 wherein the mobile node moves to the

second network before the transmission of the registration request.

20.   The method for registering a mobile node on a packet-based

communication network of Claim 17 wherein the care-of address is transmitted

through an AAA server computer to said first network.